

Lecture 10-11

- The BP curve (exchange rate market)
- The IS-LM-BP model under a fixed exchange rate
- The IS-LM-BP model under a flexible exchange rate
- The AD/AS model (equilibrium price)
- Summary

Foreign Exchange Market Equilibrium

- The BP curve gives all the combinations of (Y, r) which keeps the market exchange rate unchanged in the absence of any central bank intervention
- Derivation of the BP curve: (Diagram)
 - ◆ $\Delta Y \rightarrow \Delta M \rightarrow \Delta D_{\text{£}} \rightarrow \Delta e_{\$/\text{£}} \rightarrow \Delta r$ to keep e constant
 - ◆ Example: $\uparrow Y \rightarrow \uparrow M \rightarrow \uparrow D_{\text{£}} \rightarrow e_{\$/\text{£}}$ depreciates $\rightarrow \uparrow r$ to attract capital inflow to offset the depreciation
 - ◆ $\Delta r \rightarrow \Delta D_{\text{£}} \rightarrow \Delta e$ only if capital is mobile
 - ◆ Slope: horizontal (perfectly mobile), vertical (immobile)
- Points off the BP curve
 - ◆ Above BP $\rightarrow r$ is higher for a given $Y \rightarrow$ more K-inflow $\rightarrow e_{\$/\text{£}}$ tends to appreciate & BOP_2 in surplus
 - ◆ Below BP $\rightarrow e_{\$/\text{£}}$ tends to depreciate & BOP_2 in deficit

Factors that Shift the BP Curve

- Domestic factors: (Table 1 on p. 611)
 - ◆ Policies:
 - ◇ Fiscal policies (Δ in G on X or M)
 - ◇ Other policies (Δ in profit rate)
 - ◆ Other shocks: (Δ in P , preferences over X/M)
Example: $\uparrow P \rightarrow \downarrow S_{\text{€}} \rightarrow \downarrow D_{\text{€}}$ to keep $e \rightarrow \downarrow Y \forall r \rightarrow \text{BP left}$
- Foreign factors:
 - ◆ Policies:
 - ◇ Monetary policies (Δ in r^f , P^f , or profit rate^f)
 - ◇ Fiscal policies (Δ in G on X or M)
 - ◆ Others: (Δ in foreign income or preferences)

The IS-LM-BP Model

- An overall equilibrium is at the intersection of the IS, LM, and BP curves where both the goods and the money markets clear and there is no pressure on the exchange rate
- Under a fixed exchange rate: (Fig. 10-11 Ch. 26)
 - ◆ If IS and LM intersect
 - ◇ above BP: BOP surplus $\rightarrow \uparrow R (M^s) \rightarrow$ LM right
 - ◇ below BP: BOP deficit $\rightarrow \downarrow R (M^s) \rightarrow$ LM left
- Under a flexible exchange rate: (Fig. 2-3 Ch. 27)
 - ◆ If IS and LM intersect
 - ◇ above BP: e appreciates \rightarrow BP left & IS left
 - ◇ below BP: e depreciates \rightarrow BP right & IS right
 - ◆ An appreciated e corresponds to a higher BP curve
An expectation to appreciate shifts BP to the right

The AD/AS Model

- Determination of the aggregate price level:
 - ◆ Demand side: how much we want to consume s.t. budget constraints (AD curve)
 - ◆ Supply side: how much we can produce -- production cost and technology (AS curve)
- Derivation of the AD curve: (Figure 7-8 Ch 28)
 - ◆ $\Delta P \rightarrow \Delta M^s \rightarrow \Delta r \rightarrow \Delta LM \rightarrow \Delta Y^* (\Delta r^*)$
- The AS curve:
 - ◆ Long-run vs. short-run

Summary

- Derivation of the IS and LM curves using diagrams and macro identities
- Derivation the AD and BP curves using diagrams
- Factors shift the IS, LM, AD & BP curves and the direction of the shift
- Application of the IS-LM-BP model under a fixed exchange rate and under a flexible exchange rate